

1 WE CLAIM:

2 1. A method for developing traffic messages comprising:  
3 obtaining data indicating traffic speed at a plurality of locations on a road  
4 network, each of said locations assigned a unique location reference code;  
5 evaluating the data indicating traffic speed for said location reference codes  
6 assigned to locations along a road of said road network; and  
7 grouping location reference codes along said road having related traffic speeds  
8 into at least one congestion event along said road.

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10 2. The method of Claim 1 wherein said locations assigned said location  
11 reference codes grouped into said congestion event are contiguous along said road.

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13 3. The method of Claim 1 wherein each of said locations grouped into said  
14 congestion event are located within a predetermined distance of another of said locations  
15 within said congestion event.

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17 4. The method of Claim 1 wherein said congestion event comprises a  
18 beginning location reference code at which said related traffic speed begins along said  
19 road and a number of following location reference codes having said related traffic  
20 speeds.

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22 5. The method of Claim 1 wherein said congestion event comprises a  
23 direction.

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25 6. The method of Claim 1 wherein said congestion event comprises a  
26 beginning location reference code at which said related traffic speed begins along said  
27 road and a end location reference code at which said related traffic speed ends on said  
28 road.

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1           7.       The method of Claim 1 wherein said congestion event comprises a  
2 congestion speed value representative of the related traffic speeds of the grouped location  
3 reference codes.

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5           8.       The method of Claim 1 wherein said congestion event comprises an  
6 average speed of the grouped location reference codes.

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8           9.       The method of Claim 1 wherein said congestion event comprises a  
9 congestion event code representing a level of congestion corresponding to said related  
10 traffic speed.

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12          10.      The method of Claim 1 further comprising obtaining data indicating an  
13 expected duration of said traffic speed at said plurality of locations.

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15          11.      The method of Claim 10 wherein said congestion event comprises a  
16 duration indicating when said related traffic speed is expected to change.

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18          12.      The method of Claim 1 further comprising transmitting said congestion  
19 event as a traffic message.

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21          13.      The method of Claim 12 further comprising:  
22           prior to transmitting said congestion events, determining a road distance  
23 associated with each of said congestion events, said road distance for each congestion  
24 event being a distance from a beginning location reference code at which said related  
25 traffic speed begins along said road to an end location reference code at which said related  
26 traffic speed ends on said road; and

27           said congestion events having longer road distances being transmitted before said  
28 congestion events having shorter road distances.

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1           14.    A method for developing traffic messages comprising:  
2           using a plurality of location reference codes assigned to a plurality of locations  
3    along a road;  
4           obtaining data indicating traffic speed at said locations represented by said  
5    location reference codes;  
6           aggregating said location reference codes having traffic speeds within a  
7    predetermined range of traffic speeds, wherein said aggregated location reference codes  
8    representing contiguous locations along said road; and  
9           creating a traffic message from said aggregated location reference codes.

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11           15.    The method of Claim 14 wherein said congestion event comprises a  
12    beginning location reference code at which said traffic speeds within said predetermined  
13    range begins along said road and a number of following location reference codes having  
14    said traffic speeds within said predetermined range.

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16           16.    The method of Claim 14 wherein said congestion event comprises a  
17    beginning location reference code at which said traffic speeds within said predetermined  
18    range begins along said road and a end location reference code at which said traffic speed  
19    within said predetermined range ends on said road.

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21           17.    The method of Claim 14 wherein said congestion event comprises a  
22    congestion speed value representative of said speeds of the aggregated location reference  
23    codes.

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25           18.    The method of Claim 14 wherein said congestion event comprises a  
26    congestion event code representing a congestion level corresponding to said  
27    predetermined range of traffic speeds.

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1           19.     A method for developing traffic messages comprising:  
2           obtaining data indicating traffic speed at a first location, at a second location, and  
3           at a third location, said first, second and third locations are located along a road;  
4           comparing the traffic speed of said first location to the traffic speed of said second  
5           location;  
6           if a difference between said the traffic speed of said first location and the traffic  
7           speed of said second location is within a threshold value,  
8                 grouping the first location and the second location into a congestion event;  
9                 comparing an average traffic speed of said first location and said second  
10          location to the traffic speed of said third location:  
11          if a difference between said average traffic speed and the traffic speed of said  
12          third location is within said threshold value, and  
13                 grouping said third location into said congestion event.

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15          20     The method of Claim 19 therein said congestion event comprises a  
16          congestion speed value representative of said speeds of said grouped locations.

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18          21.     The method of Claim 19 wherein said congestion event comprises a  
19          congestion event code.

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21          22.     The method of Claim 19 further comprising obtaining data indicating  
22          durations of said traffic speed at said first location, said second location and said third  
23          location; and said congestion event comprises a congestion duration indicating when said  
24          traffic speed of one of said grouped locations is expected to change.

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1           23.    A method of developing traffic messages comprising:  
2           obtaining data indicating traffic flow at a plurality of locations on a road network;  
3   and  
4           aggregating said locations along the road network having related traffic flow into  
5   at least one congestion event along said road, wherein said aggregated locations are  
6   adjacent on said road network and said aggregated locations have corresponding traffic  
7   flow within a predetermined threshold.  
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